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Product Brief

The Beans Market in the Dominican Republic

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Approved by:
Kevin N. Smith
U.S. Embassy, Santo Domingo
Prepared by:
Wagner A. Méndez/Dr. Rubén D. Núñez

After 1996 the Dominican Republic changed from a net exporter to a net importer of beans. Some of the main problems that affect the beans market in the country are handling and storage deficiencies, and non-tariff barriers on import.

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THE BEANS MARKET IN THE DOMINICAN REPUBLIC

EXECUTIVE SUMMARY

The objective of this paper is to analyze the beans marketing system to identify the main restrictions and opportunities in the Dominican Republic to improve its market efficiency.

In addition to the existing secondary information, the study was based on interviews conducted during the months of May through July 1999, among producers and those involved in the marketing channels.

The beans market (red, black, white and pinto beans as well as pigeon peas) in the Dominican Republic is of approximately 1.4 million quintals per year. The red bean is the most consumed which is directly substituted by the pinto bean which is imported. Next in importance is the pigeon peas, followed by black and white beans.

Due to the decline in production, 1996 the country changed from a net exporter to a net importer of beans. The main categoty exported is the pigeon peas, mainly canned, but also exported fresh-refrigerated, frozen and dried.

The main production zone is the Southwestern Region. The area harvested has decreased from 1.6 million tareas in 1989 to 790 thousand tareas in 1997. A total of 908, 000 tareas were harvested in 1998.

Producers sell to middlemen, who in turn sell to wholesalers or to agro-industries, especially in the case of the pigeon peas. Wholesalers distribute to small and large grocery stores, which sell to the consumer. Beans are usually sold dry in plastic bags of one-half, one and two pounds. Supermarkets pack them under their commercial name, but there are also several companies that pack and sell their own brands of clean and selected beans.

Author: Rubén D. Nuñez, Ph.D.

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The following are some of the main problems that affect the efficiency of the bean market in the country:

- Handling and storage deficiencies;
- Limited use of grades and standards and diversity of weights and measures used in the bean market;
- The presence of non-tariff barriers to beans imports; and
- Inadequate intervention by the Government.

These deficiencies are evidenced by the presence in the market of beans with insects and foreign material or wastes, and high prices in relation to import costs and to the prices observed in similar economies, such as Central America. The price of bean protein is higher than the price of chicken protein. This is against the nutritional assurance of the poorest strata of the population.

The following measures are recommended to improve the efficiency of the beans market:

- Eliminate the non-tariff barriers to beans imports;
- Improve the information system;
- Develop a campaign promoting the use of grades and standards, and standard weights and measures;
- Develop a restructuring program for marginal bean producers, who cannot compete in a price environment that reflects the international cost; and
- Eliminate the direct intervention of the State in the marketing of beans.

LIST OF ACRONYMS

CEDOPEX	Dominican Export Promotion Center: Centro Dominicano de Promoción de Exportaciones
CWT	Hundredweight (= quintal)
DIGENOR	General Directorate of Standards and Quality Systems (Dirección General de Normas y Sistemas de Calidad)
GATT	General Agreement on Tariffs and Trade
GODR	Government of the Dominican Republic
IICA	Interamerican Institute for Cooperation on Agriculture
INESPRE	Price Stabilization Institute: Instituto de Estabilización de Precios
ITBIS	Tax on the Transfer of Goods and Services ("Impuesto sobre la Transferencia de Bienes y Servicios")
MT	Metric Ton
ONE	National Office of Statistics ("Oficina Nacional de Estadísticas")
SEA	Ministry of Agriculture ("Secretaría de Estado de Agricultura"
USA	United States of America
WTO	World Trade Organization
TAREA	= 629 Square Meters, 1/16 Ha.

I. INTRODUCTION

Beans are an important source of protein for the Dominican population, especially for the lowest income strata. Beans are usually eaten with rice and this contributes to a greater assimilation of their proteins because rice has aminoacids that complement those of the beans.

In 1998 the average monthly expenditure on beans for a family was RD$102.33, that is, 4% of the monthly family expenditure on the food basket which was RD$2,558 on agricultural, meat and dairy products (SEA, 1999).

The value of bean production is around 700 million pesos, approximately one-fourth of the value of rice production. In 1997, the value of bean production was estimated at 669 million pesos (Central Bank of the Dominican Republic, September 1998).

The bean most consumed in the country is the red bean, which is interchanged with black beans, imported pinto beans and pigeon peas. Nine hundred thousand tareas (1 tarea = 629 m^2) of beans are planted each year in the Dominican Republic, made up mainly of red beans. Production is approximately one million quintals per year. Pigeon peas are produced mainly for export. The pinto bean is the most imported bean and comes from the United States of America.

Because it is so important to the economy and the diet of the population, and because the producers are constantly requesting the Government to intervene, especially the producers from San Juan de la Maguana, the Government has intervened almost permanently in the bean market. This intervention has been observed in the direct purchases made by INESPRE and SEA and through the regulation of imports.

A large part of the harvest is obtained in a short period of time. Storage costs are high. Producers expect high prices, although the Government is usually late in their payments. This is accompanied by the low cost of imported pinto beans and the absence of consumer groups to pressure for beans to be sold at a lower price.

When the Dominican Republic was not a member of GATT, imports were regulated. After it signed the agreement, beans were included among the eight products submitted for Technical Rectification, and the Government excluded these products from the provisions of Decree No. 114-98 of March 6, 1998, which eliminated the non-tariff trade barriers established by means of decrees and administrative restrictions.

Due to this pattern of State intervention in the marketing of beans, the country has not experienced the development of a competitive market that operates without government intervention.

The objective of this paper is to analyze the marketing system for beans, for the purpose of identifying the main restrictions and opportunities that are available in the Dominican Republic to

improve market efficiency for this important source of protein.

A. Methodology

The study uses secondary data as well as the results of interviews conducted during the months of June and July, 1999 among individuals involved in the marketing channel for beans.

B. Organization of the Document

An Executive Summary precedes this Introduction. Section II describes the supply, pointing out the main aspects that influence significantly the production of beans.

Section III describes the demand, exemplifying the different marketing channels as well as the consumers' behavior. Section IV analyzes the prices at different levels of the marketing channel. Section V presents the main problems in the marketing of beans and Section VI contains the conclusions and recommendations arising from the study.

II. THE SUPPLY STRUCTURE

A. Number of Producers and their Location

The main region for the production of beans is the Southwest, where half of the total amount of the area dedicated to this crop is located. Next in importance is the Southern Region, with 16%, followed by the Central Region with 12%. The other areas are practically minimal, because in these three regions you can find 78% of the area that is dedicated to the production of beans Most of the area that is planted with red beans, followed by pigeon peas, and to a lesser degree black and white beans (Table 2.1).

There are approximately one million tareas planted with beans. This has decreased from 1.6 million areas in 1989 to 790 thousand areas in 1997 and the general trend is that there will be a decline. This tendency is mainly found in those areas where red beans and pigeon peas are harvested, which between them represent 90% of the total (Table 2.2)

The harvested area for red beans has been reduced by approximately one-half: from 800 thousand to 400 thousand areas (Table 2.2). This is probably due to the reduction in real prices, as can be seen in Section IV.

Table 2.1
Dominican Republic
Beans: Planted Area by Zone, 1998

Zone/Region	Beans			Pigeon peas	Total	%
	Red	Black	White			
Tareas (1/16 Ha)						
Southwestern Region	229,032	41907	14,076	161,864	446,879	49.78
Southern Region	70,823	15,465	7,865	49,573	143,726	16.01
Central Region	46,854	2,097	357	63,397	112,705	12.56
North-Central	57,396	2,576	241	2,868	63,081	
Northern Region	31,986	1,841	306	8,857	42,990	
Northwestern Region	25,479	3,117	1,151	12,445	42,192	
Eastern Region	26,345	6,774	59	5,857	39,035	
Northeastern Region	3,063	1,655	146	2,157	7,021	
Total	**490,978**	**75,432**	**24,201**	**307,018**	**897,629**	**100.00**
Distribution by Region (%)						
Southwestern	51.25	9.38	3.15	36.22	100.00	
Southern Region	49.28	10.76	5.47	34.49	100.00	
Central Region	41.57	1.86	0.32	56.25	100.00	
North-Central	90.99	4.08	0.38	4.55	100.00	
Northern Region	74.40	4.28	0.71	20.60	100.00	
Northeastern Region	60.39	7.39	2.73	29.50	100.00	
Eastern Region	67.49	17.35	0.15	15.00	100.00	
Northwest Region	43.63	23.57	2.08	30.72	100.00	
Total	54.70	8.40	2.70	34.20	100.00	

Source: SEA, Monitoring and Evaluation Department

The harvested area for pigeon peas has also decreased substantially, dropping from an average of about 553 thousand areas (1989-1993) to an average of about 418 thousand areas (1994-1998), in other words, a decline of approximately 24.4% (Table 2.2). Since the pigeon pea is mainly an export product, this reduction in the amount of area harvested is probably due to competition from other countries in the international market, such as in the case of Ecuador.

B. Evolution of Production and its Yields

There are approximately one million quintales of beans produced with declining production. Usually, the production varies between one and 1.3 million quintales, but in 1997 it dropped to 940 thousand quintales and in 1988 it increased to 977 thousand quintals, notwithstanding the effects of Hurricane Georges (Table 2.3)

Table 2.3
Dominican Republic
Beans: Production, 1989-1998
(Quintals)

Year	Red	Black	White	Pigeon	Total
1989	837,426	175,827	12,008	684,292	1,709,553
1990	695,353	46,519	7,729	410,052	1,159,653
1991	639,983	67,142	11,301	1,046,531	1,764,957
1992	721,891	81,235	14,470	569,281	1,386,877
1993	756,623	73,871	19,549	540,482	1,390,525
1994	711,379	83,319	26,295	469,879	1,290,872
1995	723,685	53,290	31,553	670,025	1,478,553
1996	701,287	52,975	23,709	369,376	1,147,347
1997	529,386	51,868	23,443	335,628	940,325
1998	463,872	50,235	**20,617**	**442,560**	**977,284**

Source: SEA., Regional Units of Planning and Economy (URPE)

The production of red beans and pigeon peas represents 90% of the total and, therefore, determines the main variations in both production and yields.

The production of red beans has suffered a marked decline, going from an average of 723 thousand quintals for 1989 -1996 to an average of 496 thousand quintals for 1997 and 1998 (Table 2.3)

The drop in the production of red beans is due to a reduction of both the harvested area and yields. The harvested area has practically been reduced by one-half, and yields have been falling noticeably since 1992, dropping from 1.4 quintals/tarea in that year to one quintal in 1996.

The production of pigeon peas, which is the second most important bean, has behaved erratically. Production is generally around 400 thousand quintals, but statistics show a production of one million quintals in 1992 and 335 thousand quintals in 1997. In 1998 the levels were once again in the area of 442 thousand quintals. Yields have also been very erratic.

C. Imports and Exports

The country imports and exports beans. The imports are mainly comprised of pinto beans whose flavor is very similar to that of red beans, while pigeon peas are exported in all forms, but mainly canned, fresh, refrigerated or frozen. In the past, small amounts of dry and canned beans have been exported. The value of exports has varied between US$4 million and US$12 million, mainly in canned pigeon peas, representing an export of greater added value than if it were fresh pigeon peas.(Table 2.4).

Table 2.4

Dominican Republic

Beans: Exports, 1990-1998

Year	Beans		Pigeon peas			
	Dry	Canned	Dry	Canned	Fresh	Total
			Gross Weight (Kgs)			
1990	890		124,650	11,013,625	894,929	12,034,094
1991	2,233		849	9,984,837	2,758,364	12,746,283
1992	2,164	819		10,381,242	1,649,098	12,033,323
1993	1,962	2,364	210	4,474,725	3,212,426	7,691,687
1994	3,151	66,687		7,597,372	1,843,605	9,510,815
1995	3,504	109,976		14,227,970	1,674,862	16,016,312
1996	3,389	28,170	25,751	4,588,775	883,737	5,529,822
1997	3,242		19,723	6,642,242	2,034,358	8,699,565
1998	432,985		156,556	9,488,272	1,365,651	11,443,464
			Value (US$)			
1990	546		14,985	5,151,426	772,886	5,939,843
1991	464		481	3,919,987	2,467,117	6,388,049
1992	828	540		4,652,103	1,709,577	6,363,048
1993	744	1,413	74	2,639,644	2,342,050	4,983,925
1994	2,189	31,822		4,709,814	1,849,124	6,592,949
1995	1,131	55,888		10,816,873	1,895,080	12,768,972
1196	4,634	23,080	29,727	3,374,588	927,002	4,359,031
1997	2,245		9,164	4,914,977	1,860,843	6,787,229
1998	137,544		109,841	7,646,152	1,416,275	9,309,812

Source: CEDOPEX, Statistical Bulletins Annual Exports, Several Volumes.

The Dominican Republic, once a net exporter of beans, has become a net importer. Although during the last ten years it has been a net exporter during six and a net importer during four, in general the imports have been greater in both volume and value. During the last three years the trend has been more imports. In fact, the volume imported in 1998 was the equivalent of what is produced in the country in one year (Table 2.5)

Table 2.5

Dominican Republic

Beans: Imports and Exports, 1989-1998

Year	Volume (quintals)			Value (US$1,000)			Implicit price (US$/CWT)		
	Imports	Exports	Difference	Imports	Exports	Differ-ence	Imports	Exports	Difference
1989	362,000	375,592	13,592	14,386	10,375	-4,010	39.74	27.62	-12.12
1990	180,000	265,306	85,306	7,153	5,940	-1,213	39.74	22.39	-17.35
1991	174,619	281,007	106,388	6,239	6,388	148	35.73	22.73	-13.00
1992	222,000	265,289	43,289	4,848	6,363	1,515	21.84	23.99	2.15
1993	177,000	169,573	-7,427	4,711	4,984	273	26.62	29.39	2.78
1994	138,000	209,678	71,678	3,259	6,593	3,334	23.62	31.44	7.83
1995	137,218	353,099	215,881	3,828	12,769	8,941	27.90	36.16	8.26
1996	144,000	121,912	-22,088	3,977	4,359	382	27.62	35.76	8.14
1997	549,000	191,793	-357,207	17,280	6,787	-10,493	31.48	35.39	3.91
1998	927,103	252,285	-674,818	26,192	9,310	-16,882	28.25	36.90	8.65

Source: SEA, CEDOPEX and ONE

These figures do not include some of the exports to Haiti, because not all of these are recorded. Perhaps if exports to Haiti were included, the net balance would be less than what appears above.

The figures in Table 2.5 show that sice 1992, the implicit price of exports has been greater than the implicit value of imports. This is due to the greater degree of added value for beans exports.

III. THE DEMAND FOR BEANS

A. Quantifying the Demand

In the Dominican Republic 1.4 million quintals of beans are consumed each year (Table 3.1). This amount is mainly made up of red beans, followed by pigeon peas, and in lesser quantities, black and white beans.

Imported pinto beans are included in the consumption of red beans. The consumer substitutes the imported pinto bean, which is usually sold at a lower price, for red beans. Due to the decline in the production of red beans, the consumption of imported beans has become similar to that of red beans (Tables 2.3 and 2.5).

The pigeon peas is a different case. There is approximately 400 thousand quintals produced, of which half is consumed in the country and half is exported (Tables 2.3 and 2.5).

Table 3.1

Dominican Republic
Beans: Production, Imports and Exports, 1989-1998

Year	Production (a)	Imports (b)	Exports (c)	(d)=(a)+(b)-(c)
1989	1,709,553	362,000	375,592	1,695,961
1990	1,159,653	180,000	265,306	1,074,347
1991	1,764,957	174,619	281,007	1,658,569
1992	1,386,877	222,000	265,289	1,343,588
1993	1,390,525	177,000	169,573	1,397,952
1994	1,290,872	138,000	209,678	1,219,194
1995	1,478,553	137,218	353,099	1,262,672
1996	1,147,347	144,000	121,912	1,169,435
1997	940,325	549,000	191,793	1,297,532
1998	977,284	927,103	252,285	1,652,102
Averages				
89-93	1,482,313	223,124	271,354	1,434,083
94-98	1,166,876	379,064	225,753	1,320,187
89-98	1,324,595	301,094	248,553	1,377,135
89-97	1,363,185	231,537	248,139	1,346,583

Source: Tables 2.2 and 2.5.

* In Table 3.1, production, imports and exports for a series of years are estimated, because data on inventories at the beginning of each year was not available. In taking the averages, the effect of changes in the inventory is eliminated, since the surplus of one year is eliminated with the deficit of another.

The average Dominican consumer includes beans in his daily diet, usually stewed or to accompany the rice. Another way of eating beans is by cooking them together with the rice in what is known as “moro”. The Dominican rarely eats rice without accompanying it with some kind of bean.

Red beans are marketed according to the variety because the consumer knows how to differentiate the main varieties that are produced in the country. These are PC50, Constanza, José Beta and Yacomelo. This last is light colored, looking something like the imported pinto bean.

B. The Marketing Channel

The producer sells to the middlemen, who are warehousers or truckers for the wholesalers in Santo Domingo, the principal market of the country. 30% of the population is concentrated in Santo Domingo. The wholesalers sell to retailers (in markets, supermarkets and large and small grocery stores), which in turn sell them to the consumers. The wholesalers are also importers. Agro-businesses have buyers in the countryside, but they also buy from the middlemen.

The preservation of locally produced beans requires refrigeration in order to maintain the quality

demanded by the consumer. If they are not refrigerated, they become discolored and the hardening process is accelerated, lengthening cooking time. Imported pinto beans are less demanding, since their color is not affected so much.

Since most of the harvest is carried out between December and March, it is necessary to store any surplus that is not consumed immediately. Due to the refrigeration requirements and high interest rates, the cost for storing is relatively high. There are several warehouses in the region of San Juan de la Maguana which store at room temperature and cold rooms, in addition to the INESPRE and SEA facilities, where there are warehouses to preserve the seeds that are going to be used for the next harvest season.

Since most of the harvest is carried out during a specific period of time, the middleman cannot pay more than the equivalent of the expected prices in the futures market, less storage costs. The merchant must add to this amount a margin of profit that compensates for the risk he is assuming in the operation. In other words, when the middleman pays RD$750 per quintal, he expects to sell the beans for at least RD$885 per quintal in one month, RD$910 per quintal in two months, RD$935 per quintal in three months, or RD$990 per quintal in five months, assuming the profit margin is 10% (Table 4.1).

The more uncertain the market, the greater the expectations in terms of profits. Before the partial opening of the international bean market, businessmen were less uncertain about the markets, because they controlled imports through agreements with the Government. Businessmen, in turn, used their oligopolistic power, which allowed them higher margins of profit. In this sense, neither the producer nor the consumer benefited. All the businessmen that were interviewed, without exception, identified imports as the main problem in the marketing of beans.

The producers have organized themselves to place pressure on the Government and achieve higher price levels. Before, they asked the Government to fix prices through the direct purchase of beans. This did not work out, because, although the Government offered them the expected price, the net price turned out to be lower due to the delay in payment.

Recently, their strategy has been to obtain part of the revenues generated with the assignment of import permits. They have requested the Government to assign import permits to those businessmen who buy the beans at a negotiated price. Under these circumstances, the businessmen compensate with imports for possible losses incurred when they purchase beans from local producers.

Beans were included in the Technical Rectification submitted by the Dominican Government to the WTO to modify the list of commitments. This Technical Rectification consisted of the establishment of a tariff quota, which in the case of beans is a quota of 14,667 MT with a 25% tariff for 1999, which will increase to 18,000 MT in 2004. Imports out-of-quota pay a tariff of 95% in 1999, which will be reduced gradually to 89% in 2004 (Table Appendix A2).

The marketing channel is the same for red, black and white beans. In the case of pigeon peas it is

different. The production of pigeon peas is export-orientated, because the local market is a residual market. In the case of pigeon peas, which differs from that of beans, the processing agro-industry that cans or freezes the beans for export is more important.

Producers sell the pigeon peas to middlemen, who sell them to the agro-industries. The agro-industries also buy directly from the producers, and in some cases they have purchasing agents who travel to the production areas to visit the producers.

IV. PRICE ANALYSIS

A. The Trend in Beans Prices

Since 1993, the real prices of beans have been declining. In 1993 the wholesale price of red beans dropped from an average of RD$1,500 per quintal (pesos of June 1999) to an average of RD$800 per quintal in 1999 (January to June). Before this, average prices fluctuated between RD$1,160 and RD$1,640 per quintal (pesos of June 1999)

Prices of red beans have always been higher than those of black, white, pinto beans and pigeon peas. This is because Dominicans prefer to consume this type of beans.

B. The Seasonal Nature of Bean Prices

In the past, wholesale prices of red beans used to reach its peak in October, but this changed in 1997, when the highest price was observed in July. In 1998 the price reached its peak in June. This same behavior is observed in the case of black and white beans, although not in the case of pigeon peass, which have a higher price towards the end of the year because there is a tradition to eat more pigionpeas “moro” during Christmas.

Although the main harvest season is from December to March, the difference in prices during the rest of the year is not as marked as it used to be because imported beans are available during the low harvest season. On the other hand, the non-tariff barriers for imported beans have contributed maintaining the prices during harvest. If trade without non-tariff barriers could be established, the behavior of prices would be more linked to the harvest seasons and international prices, especially the price of pinto beans coming from the United States of America.

As of June 1997, real retail prices have also been declining. In 1999, prices have been much lower than those of earlier years. This is probably because imports broke all records in 1998 exceeding 900 thousand quintals (Table 2.5). This represents 66% of what is apparently consumed in one year (Table 3.1).

C. Cost of Storage Analysis

The cost of cold storage is about RD$24 per quintal per month and the main component of this cost is financing. This is due to the relative high value of beans and the high interest rates prevailing in the country (Table 4.1). Under this cost structure, a bean that cost RD$780 a quintal in the past (including the cost for purchasing and prepara-tion, which consists of cleaning and sometimes fumigation), at the end of the first month currently costs RD$803.60 per quintal, and by the fifth month of storage it would cost RD$900 per quintal.

Table 4.1

Dominican Republic

Cost of Storage of Beans

Description	Assumptions RD$	RD$/cwt Monthly
Purchase of the beans	750	
Cost of preparation	30	
Cost of the beans (cwt)	780	
Interest (annual rate)	24.00%	
Monthly interest	780 x 2%	15.60
Storage		8.00
Monthly Cost		23.6

Cost of beans fot the first month	803.60

Source: Author's Estimates.

D. International Prices

The most relevant international price for Dominican beans is that of the American pinto bean. This bean is well accepted by Dominicans and is, therefore, a good substitute for the red bean. In this sense the cost for importing this product is very relevant. Since August 1998, the price of the pinto bean has been dropping faster than that of the red bean, thus increasing the difference between both. This greater difference can be observed in May 1999, when it represented approximately one hundred pesos per quintal.

The difference in price between the red and pinto beans is an indicator that the consumers prefer the red bean over the pinto.

There are several explanations for his huge difference. When the price is low, the consumer is less sensitive to price variations. As the price increases, the consumer becomes more sensitive to the changes in price and, therefore, it is easier for him to substitute one bean for another. On the other hand, there are consumers who are already familiar with the pinto bean, and it is easier for them to substitute the pinto for the red bean. To the extent that the availability of red beans diminishes and that of pintos increases, there are more consumers who are consider changing. This marginal group of consumers need a greater difference in price to feel motivated to switch to pinto beans.

In July 1999 the cost for importing pinto beans within the quota was RD$470 per quintal, when taking into account all expenses (Table 4.2). With a wholesale price of RD$691 per quintal, this means a gross margin of RD$220 per quintal, or 46%. This gives an idea of the profit that an individual can obtain when he is assigned part of the quota.

If 95% tariff is to be paid, the cost for importing out-of-quota increases to RD$717 per quintal (Table 4.3). This can be compared to the local wholesale prices for red beans, which is approximately RD$830 per quintal. In other words, to the extent that the population learns to substitute pinto beans for red, the lower the prices of red beans.

Table 4.2
Dominican Republic
Cost of Importing US#1 Pinto Beans with Quota
July 7, 1999

Description	Unit	US$/MT	RD$/MT
Exchange Rate			15.90
Price N. Dakota	US$/cwt	17.50	278.25
Price N. Dakota		385.81	6,134.36
Land/Ocean Freight & Insurance		64.46	1024.88
CIF Price Haina		450.27	7,159.24
Customs Exchange Rate			15.85
Tax (%)	25%	112.21	1,784.18
CIF + Tax		562.48	8,943.43
ITBIS (%)	8%	45.00	715.47
Banking Expenses	3.0%	13.51	214.78
Customs Fees		4.73	75.16
Verification		9.45	150.29
Port Authority		2.36	37.58
Unloading		2.77	44.09
Loss	1.0%	6.40	101.81
Import Costs, Haina		646.70	10,282.61
Freight to Santo Domingo		4.73	75.16
Costs in Santo		651.43	10357.77
Costs Santo Domingo per Quintal		29.55	469.82

Source: Author's estimates.

In spite of the historically low prices observed in Dominican Republic in 1998 and 1999, they are still higher than the price of red beans in Central America (Graphs 4.6 and 4.7). This clearly indicates that there are distortions in the Dominican bean market.

Table 4.3
Dominican Republic
Cost of Importing US#1 Pinto Beans without Quota
July 7, 1999

Description	Unit	US$/MT	RD$/MT
Exchange Rate			15.90
Price N. Dakota	US$/cwt	17.50	278.25
Price N. Dakota		385.81	6,134.36
Land/Ocean Freight & Insurance		64.46	1024.88
CIF Price Haina		450.27	7,159.24
Customs Exchange Rate			15.85
Tax (%)	95%	426.41	6779.89
CIF + Tax		876.68	13939.14
ITBIS (%)	8%	70.13	1115.13
Banking Expenses	3.0%	13.51	214.78
Customs Fees		4.73	75.16
Verification		9.45	150.29
Port Authority		2.36	37.58
Unloading		2.77	44.09
Loss	1.0%	9.8	155.76
Import Costs, Haina		989.43	15731.93
Freight to Santo Domingo		4.73	75.16
Costs in Santo		994.16	15807.09
Costs Santo Domingo per Quintal		45.09	717

Source: Author's estimates

V. MAIN PROBLEMS IN THE MARKETING OF BEANS

In the study related to the marketing of agricultural products, marketing problems are defined in terms of the market efficiency of each product. This market efficiency refers to the relationship that exists between the inputs dedicated to this activity and the products. The marketing of a product is defined in terms of the relative satisfaction of the consumer, which is related to obtaining a product of the desired quality and characteristics at the lowest possible price.

In this sense, the efficiency of the market has to do with two aspects: technological efficiency and price efficiency. Technological efficiency is related to the cost of transforming the product, so that any loss in the product in terms of quantity and quality is kept at a minimum during the time between harvest and consumption.

In the case of beans, it is related to the technology of harvesting, drying, cleaning, preparing, classifying and storing, as well as processing in case they are frozen (pigeon peass) or canned.

Price efficiency is related to the level of competition that exists among the different agents participating in the market. A greater number of agents will contribute to reduce the profit margin of each, and improve the level of service offered in terms of time and quality. The efficient price is the one determined by a market that has the characteristics of a model of perfect competition, where there are many participants and all have access to the same information

The meaning a price has to a seller is completely different than the meaning it has to the consumer. The producer, acting as seller, relates the sale price to his production cost, while the consumer relates it to his level of income and family budget. Thus, in common speech it is common to hear expressions such as "fair price", "expensive" and "cheap".

While the "fair price" is related more to the actual situation of the buyer or seller, the other expressions, besides being related to these, are generally the result of comparisons with other prices.

To a producer, the "fair price" is generally a price that covers his production costs plus a reasonable margin for profits. To the consumer, the "fair price" is one that allows him to acquire the product without exceeding his budget. As the cost for production increases, the more the producer's "fair price" begins to distant itself from the "fair price" of the consumer. This makes the task of the "judge" more difficult.

To a certain degree, the "efficient price" tends to be a "fair price", since it takes into account a reasonable profit margin for efficient producers, and it is the lowest sustainable price the consumers can expect in the long run. In a small economy (price taker) such as the Dominican Republic, the international price becomes the most relevant price or the reference price for both producers and consumers.

Most international prices reflect the long-term marginal cost, since they have a market with a great deal of competition, although not necessarily perfect. There are those who argue that certain markets are highly intervened (there are quotas, subsidies and other types of restrictions), which is why current international prices are lower than they would be if such interventions did not exist. This is true for sugar and milk, but not beans.

Usually, national prices are related to international prices through the border price. However, it is necessary to consider whether the product is an import or an export, because the border price of imports is very different from the border price of exports. In the case of beans, the Dominican Republic is a net importer, and thus the relevant price is the border price of imports.

To estimate the border price of imports, the costs of freight, insurance, customs and tariffs are added to the international price (Tables 4.2 and 4.3). To estimate the border price of exports, freight, insurance and customs costs are subtracted from the international price.

In a small economy, one way to increase competition in the market for a product of mass consumption is to allow any interested party to import the product in the desired quantities and qualities, as long as they abide by the phytosanitary standards and pay the established tariffs. The rules must be the same for all importers, including the Government.

The main problems found in the marketing of beans were the following:

- Deficiency in storage and handling;
- Limited use of grades and standards, as well as diversity of weights and measures;
- Application of non-tariff barriers to beans imports; and
- Inadequate intervention by the Government.

Following is a brief description of each of these problems:

A. Storage and Handling Deficiencies

The problems related to storage and handling are reflected by the presence of insects and foreign materials in the beans that are purchased by the consumer. This is due to poor handling, storage and preparation of the product to be sold. However, one must clarify that part of the beans are adequately cleaned, prepared and classified to be distributed under brand names; however, these make up only a small part of the market. There are several refrigerated warehouses that preserve beans quite well, maintaining their quality, appearance, cooking time and the absence of insects. However, most of the stock is kept in warehouses that are not refrigerated and have very inadequate insect control. For example, a bag of beans bought in a Santo Domingo supermarket for the purposes of this study was full of weevils.

Another storage-related problem is the excess amount of time that beans are stored in the country. Since the country is a net importer, if the market operates efficiently, local production would be used up at the time of the harvest and immediately thereafter (December to April), and merchants would import at times of low production (the rest of the year). To achieve this, the following would be necessary:

- A no-objection from the phytosanitary point of view would be granted at any time and to whoever applies for it;
- The producer would reduce his price expectations; and
- The following information would be immediately available to all interested parties:
  - Volume of production
  - No-objection Phytosanitary permits granted
  - Volume imported
  - Prices
  - Monthly volume of stocks/inventory
  - Volume of exports.

If businesses operate efficiently, with the low levels of production during recent years it is not necessary to store large quantities. The monthly consumption of beans is approximately 115 thousand quintals. The bean production is only greater during the months of December to March If the pigeon peass production, which is mainly for export, is not included, only during the month of February is when production is greater than 115 thousand quintals. Thus, the market can be handled with relatively low inventories.

However, the producers' price expectations are very high if a merchant's rational decision is taken into account. A businessman's sound decision is to pay a price equal to the import cost, minus the storage cost. The quota for 1999 is 323 thousand quintals, which is more than what was being imported before 1996.

In July 1999, the cost for imports was RD$470 per quintal (Table 4.2). If the RD$24 per month storage cost is subtracted from this amount (Table 4.1), a merchant could pay as much as RD$522 per quintal in February and expect to sell the beans in April. This represents a price for red beans of RD$100 more than pintos. The price expectation of red bean producers is more than RD$750 per quintal, which is 44% more than what the

merchant could pay.

If import volumes continue as they have during the last two years, the cost for importing an amount above the quota would be RD$717 per quintal (Table 4.3). If we add the additional price of RD$100 that consumers are willing to pay for red beans, it would be equivalent to RD$817 per quintal. This is RD$67 per quintal more than the price expectations of the producers. However, in case of imports over and above the quota, these quantities would be utilized until after April, because the quota is the equivalent of what is consumed in almost three month. Thus, it would be a high risk for a businessman to pay a price greater than RD$673 per quintal in February ((RD$817 – (6 x 24)).

These scenarios have been estimated on the basis of pinto bean prices of US$17.5 per quintal in North Dakota – Minnesota, USA. This is a relatively low price, although this price dropped to US$14.25 per quintal in January of 1992. In recent years the price has varied between US$17.50 and US$33 per quintal (These prices appear in www.econ.ag.gov/briefing/drybean/sld015.htm).

In repeating the exercise that appears in Tables 4.2 and 4.3, it turns out that when the FOB Dealer N. Dakota-Minnesota price is US$33 per quintal, the cost for importing within the quota is RD$816 per quintal, and out-of-quota, RD$1,253. Under these circumstances, Dominican producers could have good expectations in terms of price. However, this is an exceptional price; thus the merchants cannot risk paying such a high price to the producer.

Table 5.1 illustrates a range of import costs depending on USA prices and whether the assumptions related to the rate of exchange and penetration continue as pointed out in Tables 4.2 and 4.3. It can be noted that the cost for importing within the quota is RD$637 per quintal when the FOB dealer N. Dakota-Minnesota price is US$25 per quintal (the expected median), and RD$976 per quintal when it is out-of-quota.

Table 5.1
Dominican Republic
Cost for Importing Pinto Beans From USA, Compared to USA Price in July 1999

FOB Dealer N. Dakota-Minnesota Price US$/cwt	Import Cost in Santo Domingo Quota	
	With RD$/cwt	Without RD$/cwt
17.5	470	717
18.5	492	751
20.00	525	803
25.00	637	976
30.00	749	1149
33.00	816	1253

Source: Prepared by the author

According to information provided by one of the associations of bean producers in San Juan, they have succeeded in negotiating different arrangements with the Government aimed at maintaining the prices. Some years they were able to make arrangements so that the Government, through INESPRE or SEA, bought the beans at an agreed to price, which has always been relatively high. However,

in recent years, this plan did not work out for them because the Government did not pay on time and as a result, they ended up selling at a lower price, taking into account the interest charges that had to be paid because of said delay.

In the harvest of 1998 they were able to negotiate and the Government made a commitment to grant import permits to businessmen who purchased beans from the producers at the agreed prices. According to the producers, the businessmen bought the beans, but the Government did not give the merchants who bought the beans the import permits.

In the negotiations for purchasing the harvest at the beginning of 1999, they made the same arrangements. This time the businessmen did not want to make the deal because of the bad experience they had in 1998. However, the authorities convinced them and they agreed to purchase the beans at a high price under the understanding that SEA would give them the import permits. At the time of the interviews (June 1999) the producers informed that they were preparing a list of merchants who had purchased beans, in order to give it to SEA, so that the permits would be assigned to these businessmen in proportion to their purchase of locally produced beans.

B. Limited use of Quality Standards and Diversity of Weights and Measures

There are official standards for trading beans which have been approved by the Directorate of Standards and Systems of Quality (DIGENOR: "Dirección General de Normas y Sistemas de Calidad"). These standards were developed together with INESPRE and are used when purchasing beans from producers and merchants.

These standards classify beans under first, second or third categories, depending on whether there is or no foreign material present, the grains are whole or broken, the color, the amount of damaged grains (for different reasons) and cooking time.

Besides INESPRE, these standards are applied by producers and some businessmen, but their use in the market is relatively limited. This limited use of the standards makes it more difficult to negotiate beans, and lends itself to cause possible deceptions among the parties involved. In addition, the price report does not reflect the difference in quality and this also makes it difficult for those participating in the market to interpret the prices.

Another problem that reduces transparency in terms of pricing and marketing the beans is the diversity of weights and measures utilized throughout the country. Among the units of weights and measures used at present are the following: the quintal of 100 lbs., quintal of 110 lb., quintal of 50 kg., quintal of 55 kg., quintal of 60 kg., sack of 260 pounds, sack of 240 lb., can of 8 lb. and crate of 12 lb. In some cases they are used in this manner to compensate for the tare (allowance for excess weight due to humidity or foreign material). Although many times both

parties involved in the transaction know the difference, this diversity of weights and measures affects the transparency of the marketing process.

C. The Application of Non-Tariff Barriers to Bean Imports

Beans are not freely imported. SEA regulates the quantity and timing of beans imports. This has increased prices to unnecessary levels. Because of the huge difference between the local price and the cost for importing pinto beans, those who have been privileged with an import permit generate excessive revenues. As described above, this has also been used as a mechanism to make businessmen pay higher prices to the producers, in exchange for an import permit.

ITBIS is another aspect of the import policy that needs to be reviewed. Locally produced beans are exempt from the payment of this tax; however, it is charged to imported beans. This does not comply with the principles of the WTO, whereby imported beans must be given the same treatment as locally produced beans.

Today, food security is understood to mean that individuals have enough income to acquire food, that food is available – whether produced locally or imported – and that it can be assimilated and this requires a certain degree of health. In other words, the fact that there is food is not enough. It is necessary for people to be able to purchase it and that they are healthy enough to assimilate it. Food security is not only an agricultural problem; it requires income and health.

However, the media often continues to think about food security the way it was thought of in the past, and perceive imports as a bad thing. Thus they do not perceive that what is important for the country is that every inhabitant has the necessary resources to buy the food they require, whether it is produced locally or imported.

In the case of beans, the high prices observed in recent years attempts against food security for the poorest. Beans are generally considered to be the cheapest source of protein, and therefore, together with cereals (the cheapest source of calories), they have become an essential food to ensure adequate nutrition at the lowest prices. However, in the Dominican Republic because of the high prices of beans, the cost of bean protein is higher than the cost of chicken protein (SEA, July 1997).

D. Inadequate or Untimely State Interventions

The tradition of having the Government of the Dominican Republic (GODR) intervene in the market, and the paternalistic policy that has characterized Dominican economy have contributed to public opinion favoring the Government intervention in the marketing of beans and the regulation of imports. This intervention by the Government has resulted in higher prices for the consumers and the ineficient use of the country's scarce resources.

This is a typical problem in most countries, including the developed nations. The Dominican Republic is no exception. Inadequate or untimely interventions usually occur for several reasons, including the following:

- Control mechanisms that do not allow decisions to be made on time;
- Influence of interested groups that pressure the authorities to make decisions in their

favor;
- Political favoritism; and
- Corruption.

State intervention, through INESPRE and SEA, has been the result of pressures placed by businessmen or producers. When there have been signs of shortage because of deficient production, the Government has imported beans. These imports have not always resulted in better prices or quality to the consumers, and prevents the development of an efficient beans market.

Every year, at harvest time, the producers pressure the Government to help them obtain a high price either through the direct purchase by the Government or through negotiations with the middlemen. The latter is achieved by selectively assigning the import permits. Both mechanisms have held back the normal development of a marketing system for beans that recognizes the real cost of the storage process, which leads to a lower price at harvest.

This situation creates among the producers an expectation of prices that are higher than the efficient price and it stimulates the economy to produce more beans than it should to take more advantage of its scarce resources; and the consumers have been paying a very high price for a product that should be providing the population with the least expensive protein.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

The beans market in the Dominican Republic is approximately 1.4 million quintals per year. The main bean consumed is the red bean, which is directly substituted by the imported pinto bean. Next in importance is the pigeon peas, followed by black and white beans.

This country shifted from being a net exporter to a net importer of beans. The main bean exported is the pigeon peas, mostly canned, although it is also exported fresh, refrigerated, frozen and dried.

The main productive zone is the Southwestern Region. The harvested area has been declining from 1.6 million tareas harvested in 1989 to 790 thousand tareas in 1997. In 1998, 908 thousand tareas were harvested.

Producers sell to middlemen, who in turn sell to wholesalers or to the agro-industries, in the case of the pigeon peas. Wholesalers distribute to supermarkets and large and small grocery stores, which sell to the final consumer. Beans are mostly sold dry in plastic bags of one-half, one or two pounds. Supermarkets pack them under their name, but there are also several companies that pack and sell their own brands of clean and selected beans.

Although there are refrigerated warehouses to store and preserve beans in good conditions, most are stored inadequately. This results in a product that is infected with insects and wastes.

Compared with Central America, the prices of red beans in the Dominican Republic are the highest.

In addition, prices have been quite divorced from international prices due to non-tariff barriers utilized in the import process. This has resulted in prices well above the cost of importing, which has lead to huge economic revenues for those who manage to obtain an import permit.

This situation is an attempt against the nutritional food security for the poor, because it raises the price of what in most countries is one of the cheapest sources of protein. Due to the high prices of beans, the price of bean proteins in the Dominican Republic is higher than the price of chicken proteins, although protein from beans is not so easily assimilated by the human body.

B. Recommendations

In order to improve the efficiency of the bean market, it is recommended that the following measures be adopted:

- Eliminate the non-tariff barriers to bean imports;
- Improve the information system;
- Develop a campaign promoting the use of grades and standards of quality and standard weights and measures;
- Develop a restructuring program for marginal bean producers, who cannot compete in a price environment that reflects the international cost; and
- Eliminate the direct intervention of the State in the bean market.
- Following are further explanations concerning these recommendations

B1. Eliminate Non-tariff Barriers to Imports

The best reference price to adjust the production system of a small country (that does not determine the price) is the international price, since this reflects the long-term marginal cost.

The elimination of non-tariff barriers to bean imports would result in a market that is supplied at international prices plus tariffs and handling costs.

Since beans are included in the Technical Rectification, it is recommended that the tariff quota be applied every year as of April, to allow a greater price reference (with the higher tariff) during the months of highest production (December to March).

In summary, it is recommended that the no-objection phytosanitary permit be granted to any interested party, and that the tariff quota be assigned beginning as in April of each year.

B2. Improve the Information System

In a small market such as the Dominican Republic, it is very easy to create an over-supply or a shortage, if the market agents are not as well informed as they should be. Several merchants can bring in imports at the same time if they do not know the levels of production, the no-objection phytosanitary permits granted and the import volumes.

In addition, if the producer has no idea of the performance of the international market and the

possible cost of importing, a false expectation of prices can be created. If the price expected does not meet his expectations, it may result in losses in terms of his investment and effort. If the expected price exceeds his expectations, it may result in a loss of an opportunity to have planted for a harvest that would have generated larger profits. In other words, a good information system would reduce the level of risk.

Thus, it is recommended that the information system be improved so as to offer the following:

- Volume of production
- No-objection Phytosanitary Permits
- Volume imported
- Prices in the different markets
- Volume of monthly inventory
- Volume of exports
- International prices
- Cost of importing

B3. Develop Campaigns on the Use of Grades and Standards as well as Standard Weights and Measures

In order for the market to operate efficiently, it is important that all participants have the same information. Thus, the price, which is the main indicator of the market, must be transparent and reflect all the attributes of the product. Since, in the marketing of beans, the majority of the participants do not use quality standards, and weights and measures are not standardized, this does not happen.

It is very difficult to impose quality standards and standard weights and measures on those who participate in the market. Therefore, it is recommended that public campaigns be developed so that those participating in the market may use the existing standards and also to standarize the weights and measures used in the marketing of beans.

B4. Establish a Restructuring Program

The bean producer has created for himself a very high expectation in terms of price, based on past experience and on his ability to negotiate with the Government, which has usually given into his demands. This has resulted in a decision to plant expecting high prices, without regard to what is happening in the international market, and based on his power to pressure the Government.

It is not possible to maintain this plan under the new order of international trade. Producers will therefore have to become accustomed to prices that are lower than in the past, and be more efficient or dedicate themselves to growing other crops that perhaps are more profitable and less risky.

Under a perspective of low prices, there will be small producers who do not have access to technology and the resources needed to shift to other products. In this sense, it is recommended that a restructuring program be developed to assist these producers to help them plant and market other

crops.

B5. Eliminate the Direct Intervention of the State in the Bean Market

Year after year the bean producers have managed to get the Government to intervene in their market. On some occasions this intervention has been favorable, but in most cases it has been unfavorable for both consumers and producers. Usually the consumers face prices that are higher than those that would have been achieved with market oriented alternatives.

Many times the producers reach their objective only partially. The achievement is partial because when there are benefits for the producers, these are not available to all of them, but rather to those who are involved in the negotiations. At other times everyone has lost because the resulting price has been less than what would have been obtained without the intervention.

On the other hand, the State continues to intervene in an unplanned manner and this prevents the development of a competitive market, where the agents would invest and develop trading plans without the additional uncertainty that is generated by state intervention.

The best recommendation for everyone (Government, producers and consumers) is for the Government not to intervene in the marketing and trade of beans, so that the market can operate efficiently and so that there are less losses after harvest, efficient prices, and the consumer may receive a product of the quality expected and at the lowest possible price.